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## HOW TO TREAT HÆMORRHOIDS

## BY INJECTIONS OF CARBOLIC ACID.

BY CHARLES B. KELSEY, M. D.

THE many requests which I have received from members of the profession for an exact description of this method of treatment have decided me to write the following communication, even at the risk of repeating what I supposed I had already made sufficiently clear.

The injection of hæmorrhoids with carbolic acid, though apparently a simple and trivial affair, is to be regarded in the light of a surgical operation, and should not be undertaken by the practitioner until he has surrounded himself and the patients with all the safeguards at his command.

There are two accidents which may happen in these cases, and for which the operator must be on his guard. One is undue ulceration, the other is abscess. Ulceration is the result of using a strong solution, which causes a distinct slough of the tumor injected. The resulting ulcer is seldom larger than a silver quarter, and I have never known it to give rise to serious trouble or to refuse to heal kindly with proper local treatment. When it occurs it is well to cease further injections and to deal exclusively with this condition until it is healed. Applications of nitrate of silver, iodoform, calomel in powder, etc., are usually sufficient

to induce cicatrization. The ulcer is not generally painful, the discharge is about the only symptom of which the patient complains, and the complication is not therefore to be considered as a serious one.

It will at once be asked what strength of solution is capable of producing a slough? I can not say. The worst one I ever produced came from an injection of a fifteenper-cent, solution, and I have deliberately tried to produce one in a large hæmorrhoid by the use of undiluted carbolic acid, and failed to get anything more than a hard tumor of the size of the end of the thumb around the injection. The individuality of the patient seems to exert a decided influence, and, given a certain standard strength of solutionsay thirty-three per cent.-it is impossible to predict beforehand in how many patients it will produce a slough and in how many it will produce a simple induration. Of course, as a general rule, it can be stated that weak solutions are less apt to produce sloughs than the stronger ones, but beyond this my experience does not yet enable me to go, and I do not consider the question as one of very great importance; for these ulcers which result from a slough heal fully as well as the wounds which follow either the ligature or the clamp, and it is with these two methods of operating that I wish the treatment by carbolic acid to be compared. I hold it to be a surgical procedure, comparable in its results with either of these, and to be judged on its merits as compared with them. I believe that it possesses many advantages over either of them.

The second complication is abscess; and these are of two kinds—one trivial, the other serious. In two or three cases I have seen the following chain of events: An injection of medium strength being made, the patient has returned after a few days complaining of a painful swelling. An examination has revealed a tumor of the size of the end of the thumb

situated just at the margin of the anus, covered with skin on the outside and mucous membrane on the inside and containing pus. If left to itself, such an abscess will often discharge on both the mucous and cutaneous aspects, the two openings being free and close to each other, and the cavity will close spontaneously. An incision on the cutaneous surface, though it will relieve pain and evacuate pus, may yet not prevent a spontaneous opening on the mucous surface. When the two openings have formed, the result is a subcutaneous fistula at the verge of the anus, but one which in its results is a very trivial affair, and which, if it does not heal spontaneously, can easily be laid open in the surgeon's office, and dressed with lint from the bottom.

The other abscess is a much more serious matter, and I have no doubt that it can be produced, and in some cases has been, by an improper use of the acid. I refer to a deep abscess of the cellular tissue in the ischio-rectal fossa. Such cases have been described and are quoted as the chief objection to this method of treatment. They are due to the injection of too strong a solution, or of the undiluted acid, either into a small tumor or into the cellular tissue entirely beneath the tumor. The pure acid may be inserted into a large hæmorrhoid and cause a limited slough which will result in a perfect cure. The same injection given below a small tumor is pretty likely to cause a considerable cellulitis. It is in this way that I explain this unfortunate accident, which is rare at the most, is a result of the improper employment of the means at the operator's command, and ought not to be considered a valid objection to the plan of treatment.

I have said that the injection of hæmorrhoids reached the dignity of a surgical operation, and should be judged in comparison with other operations for accomplishing the same end. This will almost certainly be found to be the

case in any extended experience. The suffering is not always trifling; the nervous strain of submitting to any plan of treatment is not inconsiderable; the affection itself is sometimes a serious one, and, as I have already said, the operator should surround himself with all the safeguards within his reach. During the past summer I was called upon to treat an old gentleman, the mayor of a small town in Ohio, living in a high, cool, country region, but much depressed with business losses and worry. He came to New York in the middle of the hot season and submitted to treatment. The hæmorrhoids were the worst which up to that time I had ever treated by this method. The sphincter was much relaxed; the tumors had been down for twenty-five years without being replaced, and were very large and vascular. There were three distinct masses, each of about the size of a hen's egg. The case was not an attractive one, considering the age and condition of the patient and the hot weather, but I undertook it. Into the largest of the three tumors I injected five drops of a fiftyper-cent. solution. It was followed by a good deal of pain and loss of sleep for two nights, with some constitutional disturbance. On the third day, the pain of the first injection having somewhat subsided, I injected five drops of pure acid into the second tumor, and had much less trouble than with the fifty-per-cent, solution in the former case. After three days more I again injected the same amount of pure acid into the third tumor. Both of these last applications caused a distinct slough with resulting ulcerated surface and free discharge of bloody matter. After a few days more I returned to the first tumor, which had not sloughed but simply become indurated, and injected five drops of pure acid into that. The applications were all made within . the space of two weeks. During this period the patient allowed his bowels to become constipated, and I had to clean them out with repeated copious enemata. There was at one time some vesical irritation and decrease in the amount of urine, whether from direct absorption of carbolic acid or from reflex irritation I do not know, and at the end of the treatment the patient was considerably reduced in strength-so much so that I put him upon the most nourishing regimen with bark and whisky. Just as he seemed on the point of rallving I discovered a small abscess in the perinæum, which was opened, and healed kindly, having no connection with the rectum. After recovering from this and gaining a considerable degree of health he went to his home in Ohio, and was immediately brought to bed with a second, larger abscess on the buttock. From this he also made a good recovery, and has ever since been perfectly well, the hæmorrhoids causing no disturbance whatever.

This was a bad case, and for that reason I am willing to consider it as a test one. The hæmorrhoids were the largest I have ever seen operated upon by this or any other operation. The patient was seventy years old, and, though free from organic disease, was not in good general condition. The piles were cured by four injections of carbolic acid. It is true he suffered pain, he had some vesical irritation, and he had two abscesses due to his general enfeebled condition, but having no connection with the rectum. Taking the case as it stands, the operation will compare very favorably with either Allingham's or Smith's. The man was not confined to his bed at any time, and, moreover, would not submit to either of the other operations under any circumstances. Being one of the worst cases I have ever had with carbolic acid, I am still willing to place it in comparison with the average case of operation by the ligature, looking at both in the light of surgical procedures of considerable magnitude and importance.

The objections to and possible complications of this method of treatment are, therefore, easily enumerated. They are, 1, pain; 2, vesical irritation where strong solutions are used; 3, marginal abscess; 4, deep cellulitis. In the majority of cases the patient will escape them all. Deep cellulitis I should suppose to be about as frequent after this operation as pyæmia after the ligature. Marginal abscesses may occur at any time, but are easily treated. The vesical symptoms never follow any but the more powerful injections, and the pain is very variable and can not be predicted from the strength of the solution used. I have injected five minims of pure acid into a large tumor without the patient either knowing when it was done or appreciating the slightest sensation afterward. I have injected a fifteen-per-cent. solution into a small tumor and caused considerable suffering. Speaking in a general way, I do not expect much pain from a weak solution, but, nevertheless, it is sometimes met with, and I have ceased to predict its presence or absence. If it comes with any solution I am not surprised, and if it does not come I am pleased. It is, however, an exception to meet with it to any marked degree.

As far as I have been able to reduce this treatment to a matter of rule the results are as follows:

- 1. Use only the purest crystallized carbolic acid, the purest glycerin, and distilled water in the preparation of the solutions. Each, when prepared, should be perfectly colorless and clear, the acid being in perfect solution. The glycerin is added to the solution of carbolic acid in water in just sufficient quantity to make a clear fluid, and the amount is not important. As soon as a solution begins to assume a yellowish tint it should be replaced by a fresh one.
- 2. Use only the finest and most perfect hypodermic needles and a perfectly working, clean syringe with side-

handles. After each injection when the syringe is put away, clean it thoroughly, to be ready for the next time.

- 3. The treatment may be applied to every variety of internal hæmorrhoids, no matter what their size. It is not applicable to external hæmorrhoids, either of the cutaneous or the vascular variety, both of which may be treated by better means.
- 4. Before making an application give an enema of hot water, and let the patient strain the tumors as much into view as possible. Then select the largest and deposit five drops of the solution as near the center of the tumor as possible, taking care not to go too deep so as to perforate the wall of the rectum and inject the surrounding cellular tissue. The needle should be entered at the most prominent point of the tumor. If the hæmorrhoid does not protrude from the anus, a tenaculum may be used to draw it into view. After the injection has been made the parts should be replaced, and the patient kept under observation for a few minutes to see that there is no unusual pain. The injection will cause some immediate smarting if it is made near the verge of the anus; if made above the external sphincter, the patient may not feel the puncture or the injection for several minutes, when a sense of pressure and smarting will be appreciated. In some cases no pain will be felt for half an hour, but then there will be considerable soreness, subsiding after a few hours. If it increases, instead of disappearing, and on the following day there is considerable suffering, which may not perhaps be sufficient to keep the patient on his back, but is still enough to make him decidedly uncomfortable, it is a pretty good indication that a slough is about to form. For the reason that it is impossible to tell absolutely what the effect of an injection is to be until at least twenty-four hours have passed, it is better to make but one at a visit and to wait till the full

effect of each one is seen before making another. If on the second day there is no pain or soreness, another tumor may be attacked, and this will often be the case.

5. The strength of the solution must be regulated by the nature of the case, and in my own practice varies from five per cent, to pure crystallized acid. In a large, vascular, prolapsing tumor, which is well defined and somewhat pedunculated, five drops of pure acid may be used with the expectation of producing a circumscribed slough which will result in a radical cure. A thirty-three-per-cent, solution under the same conditions will probably produce consolidation and shrinkage without a slough, but the injections will have to be repeated several times. A small tumor which protrudes but slightly, is not pedunculated, and can be seen and felt as a mere prominence on the mucous membrane, may be cured by a single injection of a five-per-cent. solution, which will cause it to become hard and decidedly reduce its size, while an injection of a fifty-per-cent, solution might make considerable trouble, the remedy being too powerful for the disease. Guided by this principle, some experience will soon determine the choice of the solution. There is no arbitrary rule which can be applied to every case. As in any other surgical operation, some cases will be more satisfactory than others, and an occasional accident must be expected; but, on the whole, it seems to be the best method of treatment vet devised.

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It has a large circulation in all parts of the country, and it is largely on this account that it is enabled to obtain a high class of contributed articles, for authors know that through its columns they address the better part of the profession; a consideration which has not escaped the notice of adver-

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